

# ANALYST: Hypothesis Tests

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## *One and Two-Sample*

There are eight hypothesis test options in Analyst for comparing one and two-samples. These tests are accessed using [**Statistics ÷ Hypothesis Tests ÷** ] and choosing from the following options:

**One-sample z-test for a mean...** Tests whether the mean of a population is equal to the value specified in the null hypothesis. This test is appropriate if the standard deviation or variance is known, and if one of the following is true:

- The data are normally distributed.
- The data are not normally distributed, but the sample size is large. A sample size of at least 30 is generally considered to be sufficient.

**One-sample t-test for the mean...** Tests whether the mean of a population is equal to the value specified in the null hypothesis. This test is appropriate if the standard deviation or variance is known, and if one of the following is true:

- The data are normally distributed.
- The data are not normally distributed, but the sample size is large. A sample size of at least 30 is generally considered to be sufficient.

**One-sample test for a proportion...** Tests whether the proportion of a population giving a certain response is equal to the proportion specified in the null hypothesis.

**One-sample test for a variance...** Tests whether the variance of a population is equal to the value specified in the null hypothesis.

**Two-sample t-test for means...** Tests whether the means of two *independent* (unpaired) populations are equal or whether they differ by a specified amount.

**Two-sample paired t-test for means...** Tests whether the means of two *dependent* (paired) populations differ by a specified amount.

**Two-sample test for proportions...** Tests whether the proportions of two populations giving a certain response are equal to each other (or differ by a specified amount).

**Two-sample test for variances...** Tests whether the variances of two populations are equal to each other. The output contains the results of testing whether the ratio of the variances of the two samples is equal to one.

## One-Sample Tests

In the dialog box for a one-sample test about a mean, proportion or variance, you must specify a *variable* to be analyzed as well as a *hypothesized mean, proportion or variance*. The mean (proportion or variance) of the variable in the data set is compared to the mean (proportion or variance) you specify in the hypotheses portion of the dialogue box.

### One-Sample *t*-Test Dialogue Box

**Candidate list:** all the variables in the data set



**Variable:** variable to be analyzed

